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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,940	02/02/2007	Matthew N. Songer	82271	6140
22342 7590 04/15/2009 FITCH EVEN TABIN AND FLANNERY 120 SOUTH LASALLE STREET SUITE 1600 CHICAGO, IL 60603-3406				
			EXAMINER SCHNEIDER, LYNNSY M	
			ART UNIT 3733	PAPER NUMBER
			MAIL DATE 04/15/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/553,940

Applicant(s)

SONGER ET AL.

Examiner

LYNNSY SCHNEIDER

Art Unit

4118

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 63-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 63-77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 and 05 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB008)
Paper No(s)/Mail Date 3/5/2008.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is responsive to the amendment filed on 3/5/2008. As directed by the amendment: claims 1-62 have been cancelled and claims 63-77 have been added.

Thus, claims 63-77 are presently pending in this application.

Claim Objections

1. Claim 72 is objected to because of the following informalities: Claim 72 states that it is dependent upon claim 72. Appropriate correction is required. For examination purposes, examiner will interpret the claim as being dependent upon claim 71, which is the independent claim and the only claim listed prior to claim 72.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 66 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 66 recites the limitation "the direction of anchor lock collar member rotation". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 63, 64, and 66-75 are rejected under 35 U.S.C. 102(e) as being anticipated by Freid et al. (Pub. No. US 2004/0019353 A1).

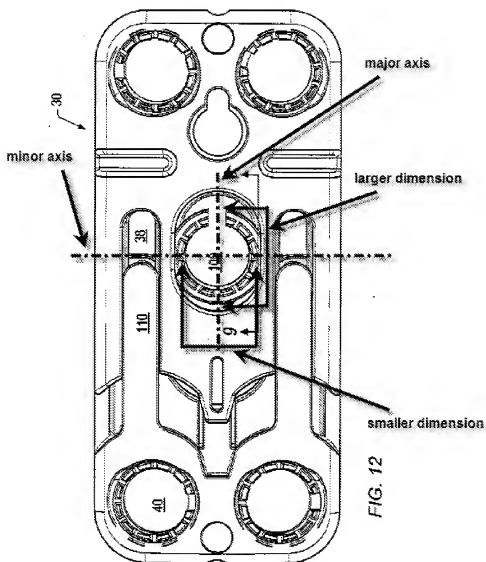
Freid et al. discloses a device for stabilization of adjacent vertebrae of a spine, the device comprising: a bone plate 32/24 (figure 2); a plurality of bores 40, 100 (figure 12) in the bone plate 32/34 each configured to receive a bone anchor 182 (figures 22 and 23) extending therethrough; an anchor lock collar member 46 (figures 2 and 26) for being rotatably received in one of the bores 40, 100 (figure 2); a small diameter, upper portion 50 (figure 25) of the anchor lock collar member 46 having notches (between projections 50, figure 25) spaced circumferentially thereabout for receiving a driving tool therein to rotate the anchor lock collar member in the one bore; a larger diameter, lower portion 206 (figure 26) of the anchor lock collar member 46 having a split-ring construction (figure 26) so that the anchor lock lower portion 206 has facing circumferential ends (illustrated in figure 26) that are spaced apart from one another (gap 214, figure 25); and cooperating inner and outer surfaces 44 (figure 2) and 210 (figure 26) of the one bore 40 and the anchor lock lower portion 206 respectively (paragraph 0069), which could cause the facing ends to shift toward each other with rotation of the anchor lock collar member from an open, bone anchor receiving configuration to a clamped, bone anchor locking configuration so that a bone anchor

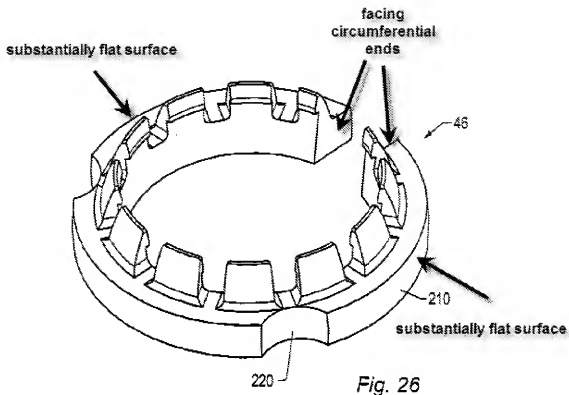
extending through the one bore and the anchor lock collar member therein is locked in the one bore against back out therefrom. The anchor lock lower portion includes two substantially flat surfaces (illustrated in figure 26) that are opposed to one another and each abut the inner bore surface 44 when the anchor lock collar member 46 is in the clamped, bone anchor locking configuration to resist anchor lock rotation away from the bone anchor locking configuration. The facing circumferential ends (illustrated in figure 26) are oriented on the anchor lock collar member 46 in a position that generally avoids contact with the inner bore surface 44 (figure 2) so as to minimize hang-ups when the anchor lock is rotated between bone anchor receiving and locking configurations. The facing circumferential ends (illustrated in figure 26) of the anchor lock collar member 46 form a gap spacing 214 that is positioned in a predetermined location when the anchor lock collar member is shifted to the bone anchor locking configuration to allow a surgeon to visually recognize when the anchor lock has been rotated to the locking configuration. The anchor lock collar member 46 has a concave inner surface (figure 26) that compresses around a convex surface of the bone anchor (figure 22 and paragraph 0073, sentences 2 and 3) when the anchor lock is in the clamped, bone anchor locking configuration. The bone plate 32/34 can be made of stainless steel or titanium (paragraph 0061).

At least one of the bores is a dynamized bore 100 (figure 12) having an elongate configuration to allow a bone screw 182 extending therethrough and into a vertebrae to shift relative to the bone plate 32/34 (paragraph 0095); a screw lock member 46 configured to be rotatably received in the dynamized bore (figure 12) for being rotated

between a screw receiving unlocked configuration and a screw locking configuration; and a substantially smooth inner surface of the screw lock member 46 (figure 26) having an inner diameter sized in clearance with the bone screw 182 when in the screw receiving unlocked configuration (with projections 50 deflecting outward, paragraph 0073) with the inner diameter being substantially uniformly reduced in size when the screw lock member is in the screw locking configuration (with projections 50 contracted after insertion of the fastener, paragraph 0073) so that the smooth inner surface provides a uniform clamping force about the bone screw to allow relative translation thereof in the dynamized bore and keep the bone screw from backing out therefrom (paragraph 0073). The rotatable screw lock member 46 has a larger dimension (illustrated in figure 12) and a smaller dimension (illustrated in figure 12), the larger dimension being brought to bear against a recess 102 (figures 10 and 11, and paragraph 0096) located in the dynamized bore 100 upon rotation of the screw lock member from the screw receiving configuration to the screw locking configuration which shortens the larger dimension and causes the screw lock member to constrict about the bone screw (paragraph 0129). The dynamized bore recess 102 has both minor "second" and major "first" axes (figure 12 and paragraph 0095) and the larger dimension (illustrated in figure 26) of the screw lock member 46 is aligned with the major "first" axis of the recess when the screw lock member is in the screw receiving configuration and the minor "second" axis when the screw lock member is in the screw locking configuration (illustrated in figure 12). The substantially smooth inner surface of the screw lock member 46 conforms to a corresponding surface on the bone screw 182

(paragraph 0073), the screw lock member inner surface and the corresponding surface on the bone screw 182 having a greater coefficient of friction than the larger dimension 210 of the rotatable screw lock member 46 and the dynamized bore recess 102 to permit dynamization of the rotatable screw lock member within the bore without loosening engagement of the screw lock member about the bone screw (paragraph 0074). In paragraph 0074, Fried et al. discloses that the retainer 46 may engage a head of a fastener without the retainer binding to the plate. Since the inner surface of the retainer is engaging the head of a fastener and the retainer is still moveable in the plate, the coefficient of friction between the recess 102 and the outer surface 210 of the retainer is less than between the outer surface of the fastener head and the inner surface of the retainer.





Claim 66 does not recite any structural limitations. Please see paragraph 7 below.

Regarding claim 75, Freid et al. discloses a bone plate system for securing a plurality of bones in a desired alignment comprising: a bone plate 32/34; a plurality of bores 40, 100 extending through the plate 32/34 which receive bone anchors 182 for securing the plate to the plurality of bones; a locking collar 46 configured for being received in one of the bores 40, 100; an upwardly facing cam surface 224 (figure 28) of the locking collar 46 configured for camming against a cooperating downwardly facing surface (downward facing portion of recess 48) in the bore so that rotation of the locking

collar toward a locked configuration thereof causes a tight wedge fit of the collar in the one bore to avoid reverse rotation back toward an unlocked configuration of the collar in the bore.

7. With regard the statements of intended use and other functional statements, they do not impose any structural limitations on the claims distinguishable over Freid et al. which is capable of being used as claimed if one so desires to do so. *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Furthermore, the law of anticipation does not require that the reference "teach" what the subject patent teaches, but rather it is only necessary that the claims under attack "read on" something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freid et al. in view of Simmons et al. (Pat. No. US 6,402,206 B1).

Regarding claim 65, Freid et al. discloses the claimed invention except for each substantially flat surface being adjacent an anchor lock camming surface that cams against the inner bore surface.

Simmons et al. teaches an anchor lock 42 (figure 3) having substantially flat surfaces adjacent anchor lock camming surfaces 44 (figure 3) that cam against an inner bore surface 50 when the anchor lock 42 is rotated in order to compress the split ring and increase the force applied to the material it surrounds (col. 1, lines 58-63)

It would have been obvious to one skilled in the art at the time the invention was made to modify the lower portion of the anchor lock disclosed by Freid et al. to have camming surfaces as taught by Simmons et al. for the purpose of increasing the force applied to the anchor that the anchor lock surrounds (col. 1, lines 58-63).

10. Claims 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freid et al. in view of Yamazaki (Pat. No. US 6,966,735 B1).

Regarding claims 76 and 77, Freid et al. discloses the claimed invention except for the cam surface 224 including a ramp disposed between a lower height and a higher height.

Yamazaki teaches a locking collar 25 (figure 11) having a cam surface 31 (figure 11) including a ramp 28 (figure 11) disposed between a lower height (at 33, figure 11) and a higher height (at 34, figure 11) and a projection 34 (figure 11) for mating with downward facing surface 33 (figure 11) of element 24 for the purpose of providing a loosening preventing apparatus for the screw mechanism which achieves a positive non-loosening effect with practical processing costs (col. 3, lines 51-54).

It would have been obvious to one skilled in the art at the time the invention was made to modify the cam surface of the locking collar and the downward facing surface of recess 48 disclosed by Freid et al. to have a ramp and projection for mating with a matching downward facing surface as taught by Yamazaki for the purpose of achieving a positive non-loosening effect with practical processing costs (col. 3, lines 51-54).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYNNSY SCHNEIDER whose telephone number is (571)270-7856. The examiner can normally be reached on Monday - Friday, 9:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571)272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. S./
Examiner, Art Unit 4118

/Eduardo C. Robert/
Supervisory Patent Examiner, Art Unit 3733